

In the Claims:

Please cancel claims 1-24 without prejudice and add new claims 25-45.

Listing of Claims

1-24 (Canceled)

25. (New) A method of reconstructing a paved road, comprising:

providing reclaimed asphalt pavement particles;

selecting a substantially solvent-free emulsion;

mixing said emulsion and said reclaimed asphalt pavement particles to form an asphalt emulsion mixture; and

testing said asphalt emulsion mixture for performance using a raveling test and a moisture susceptibility test.

26. (New) The method of claim 25, further comprising:

testing said asphalt emulsion mixture for performance using a stability test.

27. (New) The method of claim 26, further comprising:

testing modulus of said asphalt emulsion mixture.

28. (New) The method of claim 27, wherein resilient modulus is tested.

29. (New) The method of claim 25, further comprising:

testing modulus of said asphalt emulsion mixture.

30. (New) The method of claim 29, wherein resilient modulus is tested.

31. (New) The method of claim 25, further comprising:

testing said asphalt emulsion mixture for performance using a thermal cracking test.

32. (New) The method of claim 25, further comprising:

testing said asphalt emulsion mixture for performance using a thermal cracking test and a stability test.

33. (New) The method of claim 25, wherein said emulsifier is cationic.

34. (New) The method of claim 25, further comprising:

taking samples of said road; and

using said samples to make reclaimed asphalt pavement particles.

35. (New) The method of claim 34, further comprising:

inspecting said samples to determine the composition of layers in said samples, the thickness of said layers, and variations between samples.

36. (New) The method of claim 34, wherein said samples are crushed to form reclaimed asphalt pavement particles.

37. (New) The method of claim 34, wherein said samples are representative of variations in the road.

38. (New) The method of claim 25, wherein at least two asphalt emulsion mixtures are formulated for at least two different parts of the road having different compositions.

39. (New) The method of claim 25, wherein said asphalt emulsion mixture ravel no more than about 2% by weight after curing for at least about 4 hours.

40. (New) The method of claim 31, wherein said asphalt emulsion mixture has a critical cracking temperature that is at least as low as the possible coldest temperature of said road with 98% reliability.

41. (New) The method of claim 25, wherein said asphalt emulsion mixture has a retained strength, as determined by said moisture susceptibility test, of at least about 70%.

42. (New) The method of claim 25, further comprising:

removing pavement from said road to form reclaimed asphalt pavement particles, leaving at least about an inch of said pavement on said road;

mixing said reclaimed asphalt pavement particles with said emulsion to form a cold in-place recycling layer; and

applying said cold in-place recycling layer to said road.

43. (New) The method of claim 42, further comprising:

inspecting said road to determine if said road is thick enough to leave at least about an inch base of pavement after removing pavement;

determining if said road has a structurally sound base; and

determining if said road has good drainage.

44. (New) The method of claim 42, further comprising:

applying a wearing surface selected from the group consisting of a cold, hot, or warm mix overlay, a seal coat, a chip seal, a fog seal, or other surface treatment.

45. (New) The product of the process of claim 42.